**Size domain test**

In order to determine the optimal domain size, we tested four different domain sizes for the pelagic and all the benthic scenarios (i.e., 300 x 1500 mm, 300 x 1700 mm, 400 x 1500 mm, 400 x 1700 mm) utilizing the largest included three-dimensional model (i.e., *Stensiopelta*) with an inlet velocity of 0.3 m s−1. In all these cases, flow velocity and pressure are fully developed, showing nearly identical patterns (see figures below). This justifies the use of the smallest domain size (i.e., 300 x 1500 mm) in order to minimize computing time.

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